Legal framework of the cluster policy in Russia

Marco jurídico de la política de clústers en Rusia

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1. Introduction
It's not a secret that modern economic relations are in crisis. The national economy of...
Russia, which is experiencing hard times, is no exception. Many of the previously tried economic and legal models either do not work or fail to provide the efficiency that is presently expected of them. The organization of industries and their legal regulation do not give the expected positive economic effect in the rapidly changing conditions, or the positive economic effect is accompanied by a pronounced negative social effect, which prevents from widely replicating the previously tested models for in the majority of economies, including Russia.

Many governments pay considerable attention to clusters as one of the promising spatial organization forms of the national economy. Russian law-makers are taking the first steps in this direction. At the same time, one should not think that cluster policy is a complete novelty in the legal doctrine. Based on the geography, resource base, regional human resources, and other factors, the USSR actively developed regional manufacturing complexes. During the economic reforms of the 1990s, many of them were dismantled. At best, their place was occupied by new, typically small or medium-sized manufacturing businesses, at worst — by trade, logistics, housing, and other projects.

At a new stage of development in the existing economic setting, the government is making attempts to develop and subsequently implement a national cluster policy. This is clearly evidenced by the recent years’ legislative effort. However, the absence of dedicated research in this field complicates the implementation of such a policy.

2. Methodological Framework

In this research, following methods were used: comparative, theoretical (analysis, synthesis, refinement, generalization, analogy method), empirical (study of the cluster policy in the EU and US), observation, comparative historical method (comparative analysis of Russian and international experience in the development of cluster policies), as well as methods of systemic, structural and functional, and statistical analysis.

2.1. Literature Review

The conceptual basis of cluster policy was laid in the works of Western researchers — founders and members of several schools of thought. For instance, the standort theory originated in the German geographical school of thought. A. Weber (1993) and other prominent members of the school paid special attention to the effective spatial organization of industries. To describe the most advantageous spatial arrangement of industry members, the term standort was proposed. The theory developed by German scientists took into consideration the following factors — transport costs (the least transportation cost location), labor costs (the least operating cost location).

A. Marshall (1993) identified the factors by virtue of which certain groups of companies concentrated in a particular area have greater economic efficiency compared to other economic agents.

Such factors are:
- pools of highly skilled workers in the labor market,
- specialization of suppliers,
- flow of knowledge, or active sharing of knowledge between companies in a certain territory.

In addition to the so-called material location factors, A. Marshall (1993) also stressed the "special atmosphere" of the environment and the territory, which is also an obvious advantage of industry concentrations. It should be noted that government initiative plays an important role in the emergence and development of clusters.

Subsequently, A. Lösch (2007) supplemented the standort theory with the criterion of profit maximization, suggesting that more attention should be paid to inter-firm cooperation. As a result, the theory of industrial location (localization theory) was born.

The theory of the industrial location is one of the theories where the optimal location of a
firm is determined by a set of factors — the transport factor, the labor factor, the agglomeration factor, and other factors (Weber, 1993).

In the USSR, the theory of regional industrial complexes (RIC) was developed and subsequently implemented in practice. The main factor in translating the theory behind RIC into practice has been government directives. However, they did not appear out of thin air and were based on research recommendations taking into account the geographic location, resource base, government policy (regional, national, HR, etc.).

In general, the regional industrial complexes were built on the basis of the factors previously proposed by A. Weber (1993) and other Western economists, though applied not to a single enterprise, but to a set of the industry’s enterprises, as well as enterprises in related industries. In other words, related industries were built around the "core" (a large industrial project). The main difference between Soviet industrial complexes and their Western counterparts was the planned origin of the former and their functioning in the absence of market competition (Kolosovsky, 1969).

Clusters built on the government initiative have both positive and negative features. On the one hand, they form a positive institutional and social environment, help attract investment, reduce risks for potential participants, on the other hand, they are capable of killing private business initiative and the competitive environment.

According to the concept developed by M. Porter (2000) based on his study of the most successful global companies, geographically related companies are characterized by a combination of cooperation and competition, which ultimately makes them more effective.

In the modern interpretation, clusters are characterized within the framework of this concept by the following components:
- production (a combination of industries in the cluster, localization of production, etc.),
- spatial (geographical proximity, location features),
- innovation (availability of research centers, commercialization of innovations),
- community (interaction, trust, coordination) (Record, 2010).

The cluster theory continues to evolve. It should be noted, in particular, that in the 2000s the triple helix mechanism was discovered as a condition for the balanced development of clusters (Etzkowitz & Leydesdorff, 1995). Cluster development in the modern economy requires helical interaction between the business community, authorities, and the research community (research - innovation - commercialization, marketing of innovative products). In the absence of effective interaction between the above components in any of the sections of the helix, the formation and development of modern (innovative) clusters becomes difficult or impossible.

By the 1990s, the accumulated experience in the implementation of cluster policy at the local level allowed a number of European countries to develop and implement national programs of cluster development. In the 2000s, the first documents on cluster policy were adopted at the supranational level. For example, in accordance with Art. 37 of the Regulation 1221/2009 of the European Parliament and of the Council of November 25, 2009 on the voluntary participation by organizations in a Community eco-management and audit scheme (EMAS), repealing Regulation (EC) 761/2001 and Commission Decisions 2001/681/EC and 2006/193/EC (The document is not valid in the Russian Federation, 2001). Member States should encourage local authorities to provide the necessary assistance to clusters in meeting specific requirements.

Attention is also increasingly paid to clusters in Eurasia. Treaty on the Eurasian Economic Union (Astana, May 29, 2014) refers to industrial clusters as one of the industrial cooperation tools, and according to the Recommendation 25 of the Board of the Eurasian Economic Commission of December 13, 2016 on coordination of joint research and innovation activities of the Member States of the Eurasian Economic Union in the agroindustry, models should be developed of international clusters supporting the common agricultural products market of the Eurasian Economic Union (The official online legal database, 2015; Legal Portal of the Eurasian Economic Union, 2016).
Many of the economically developed European countries have regional or global clusters. For instance, Germany has several global clusters (Hamburg, Dresden, Munich) specializing in the engineering and manufacturing of motor vehicles and other equipment. One of the best known global clusters in the US is the Boston-Cambridge cluster. It brings together universities, medical centers, and about 500 companies specializing in the field of pharmaceuticals and biomedical technology. The cluster’s members employ 50 thousand professionals. The share of the innovative products of this cluster alone is more than 5% of the combined global developments in the industry.

The most illustrative is the example of cluster policy implementation in Singapore. In the second half of the 20th century, Singapore’s politicians and law-makers adopted a number of crucial documents aimed at overcoming the country’s technological lag compared to developed nations. At that time, several priority sectors (information and telecommunication technology, biochemistry, pharmaceutics, etc.) were singled out, which required extensive government regulation and support. Simultaneously, a large-scale education effort was launched, resulting in a stable supply of local highly qualified professionals for the prospective sectors of the economy (Ageeva, 2014). The results could be seen soon — Singapore is presently among the ten richest nations in the world. The main economic industrial potential of the country is concentrated in its multiple compact innovation clusters.

In Russia, an attempt is made to borrow and adapt the best practices for implementing a cluster policy. To this end, in order to address the most challenging economic problems, a number of policy documents have been consistently adopted, emphasizing the role of clusters in promoting the innovative and sustainable social and economic development of the nation.

One of the first documents containing multiple references to clusters is the Concept of Long-Term Social and Economic Development of the Russian Federation until 2020 (Enacted with Instruction 1662-r by the Government of the Russian Federation, 2008). The Concept notes the need to move to a new model of spatial development of the Russian economy, in particular, to establishment of new centers of social and economic development, based on the development of the energy and transport infrastructure and the establishment of a network of regional clusters helping to materialize the competitive potential of Russia’s regions.

Launch of a cluster policy in Russia was explicitly stated in Letter 20615-ak/d19 by the Ministry of Economic Development of the Russian Federation of December 26, 2008 on the implementation of cluster policy in the Russian Federation (The letter was never published officially, 2008). By the Letter, the Ministry of Economic Development of Russia established a working group for the implementation of cluster policy, as well as expert and advisory boards. At the same time, the Ministry of Economic Development of the Russian Federation sent methodological recommendations on the implementation of cluster policy to the constituent entities of the Russian Federation.

The concept of cluster and related concepts have recently been introduced into individual federal laws (Federal Law 488-FZ of December 31, 2014 on Industrial Policy in the Russian Federation, 2015), which indicates that the government intends to actively implement the cluster policy.

At the same time, one has to distinguish between economic and legal categories such as cluster and cluster policy. The legal concept of cluster was formulated in Federal Law 488-FZ of December 31, 2014 on Industrial Policy in the Russian Federation in the context of industrial clusters, where an industrial cluster is understood as a combination of industrial agents connected by mutual relations in this field due to territorial proximity and functional dependence and located in one or more constituent entities of the Russian Federation.

In our opinion, a cluster is not only a community of closely interrelated industrial enterprises, but also that of educational and research institutions that promote competitiveness.

In this regard, it seems important to understand: what is meant by cluster policy in Russia? What is the purpose and objectives of the cluster policy?
For instance, according to V.A. Filchenkov and E.S. Pogrebova (2011), a cluster policy is understood as a system of public measures and mechanisms for supporting clusters, ensuring the competitiveness of regions and enterprises within the cluster and ensuring innovation.

According to S.N. Bludova (2006), cluster policy is characterized by the formation of interrelations between economic actors participating in the cluster, simplification of access to new technology, risk distribution via various forms of joint economic activity, joint research, joint application of knowledge and use of fixed assets.

V.V. Lizunov, S.E. Metelev, and A.A. Soloviev (2012) interpret cluster policy as a set of measures and actions aimed at achieving the defined target in the public interest, namely, for the formation, development, and effective operation of clusters. In their opinion, cluster policy combines industrial, regional, investment, innovation, education, and other policies.

Based on the conducted analysis of existing approaches, the conclusion can be made that cluster policy should be understood as organizational and legal effort by the government, taking into account the industrial, educational, innovative, regional, and other factors and aimed at improving the efficiency and competitiveness of operations.

An attempt to formulate the goal and objectives of cluster policy as an instrument of economic policy was made in the Methodological Recommendations on the Implementation of Cluster Policy in the Constituent Entities of the Russian Federation (Approved by the Deputy Minister of Economic Development of the Russian Federation, 2008).

The main goal of implementing the cluster policy is to ensure high economic growth and diversification of the national economy by strengthening the competitiveness of businesses, vendors of technology, components, specialized manufacturing and support services, research and educational institutions.

The Methodological Recommendations list following objectives of cluster policy:
- creating conditions for effective organizational development of clusters,
- providing effective support of individual projects (development of industries, small and medium enterprises, innovations, etc.),
- ensuring effective methodological, information, consulting, and educational support.

The role of the government and society within the framework of the cluster policy can vary depending on the form of government, regional aspects, the life cycle of the cluster, geopolitical and other factors.

In the implementation of cluster policy the government can:
- stimulate demand for the cluster’s products,
- conduct education and research (research and technology) policies promoting the development of clusters,
- build or facilitate the development of the infrastructure required for the effective operation of clusters (transport, communications, etc.),
- create a supportive legal environment for the economic activity of clusters.

In the world practice, various forms of stimulating clusters exist — direct financing, establishment of and support to research and investment funds, reduction of the tax burden, customs duties on imported equipment, etc.

The results of implementing the cluster policy include higher productivity and innovation activity of the economic agents participating in the cluster, as well as higher growth rates of...
small and medium-sized businesses, increase in direct investment, and accelerated socio-economic development of the host regions of the clusters.

One should not think that cluster policy is something absolutely new in economic policy, adopted from Western practices. As already noted, Russia at different times of its history paid attention to individual forms of spatial organization of the economy, which gave positive economic effects.

Cluster theory proposes an organization of economic activity, in which geographically close agents in same industry or sector and connected agents complement each other, achieving a synergistic effect from their activity under market competition.

Cluster theory is in fact a logical development of earlier theories (from standorts and industrial regions to clusters). It takes into account both long-established factors (geographic location, resource base, etc.) capable of providing a synergistic effect, as well as previously unknown factors playing an increasingly prominent role in the modern economy (infrastructure, innovation, quality of legal institutions (Mokhov, 2012)).

The conventional classification of the economy into industries and sectors is being replaced by clusters — groups of interrelated leading economic agents bringing together industry, science, health care, and education.

When developing a cluster policy, the following principles should be taken into account:
- synergies,
- integration,
- achievement of economic and social effect,
- stimulating the socio-economic growth of the cluster’s host region,
- flexibility of the cluster (ability to change).

Two basic models of cluster policy exist — the dirigist model and the liberal model (Kurkudinova, 2012).

Dirigist cluster policy is pursued by countries typified by the active role of the state in the economy. Examples include France, Singapore, Japan, etc. These countries pursue an active state cluster policy.

Analysis of business law and of cluster law indicates that Russia lies close to this model of state regulation of the economy (Gubin & Lakhno, 2017). State intervention takes the form of legal regulation, and therefore the significance of legislation will increase as the cluster policy is implemented.

Liberal cluster policy is pursued by governments whose intervention in the economy is minimal (USA, Canada, and some others). This policy model establishes the general framework for the operation of clusters.

But regardless of the cluster policy model, it should take into account the innovation factor as a mandatory factor of the cluster policy. Clusters should be capable of rapidly changing, which requires innovation (novel products, technologies, management solutions, etc.). In this regard, innovation becomes an indispensable feature of any cluster, rather than of individual cluster types. It is the degree of innovation in the cluster that can vary. Some industries are more knowledge-intensive and innovative (pharmaceuticals, biotechnology, medicine, information, telecommunication, computer technology, nuclear technology, telecommunications, etc.), some are less knowledge-intensive, but they should also be aimed at achieving strategic targets, acting as growth engines.

Developing a rational spatial organization of the national economy and its regions is the most important function of any state, required for its survival and sustainable development. In the literature, various forms of spatial organization of the economy have been identified — free (special) economic zones, clusters, technopolises, technology parks, etc. From the legal point of view, forms of spatial organization recognized by law are of primary importance. Economic policy is implemented by supporting various sectors of the economy, as well as regional economy. Cluster policy pursued by the government can be added to this list. In particular, this conclusion is supported by the following legislation: Federal Law 488-
A comparative analysis of the features characteristic of Skolkovo Innovation Center and the typical attributes of a cluster demonstrates a significant similarity between the two (closely related industries, territorial factor, etc.). In fact, Skolkovo Innovation Center is an innovation protocluster. In the future, it will either develop into a full-fledged cluster or remain in the existing limited form, unable to transform into a full-fledged innovation cluster. A major specialized institution for innovation support may also form on this foundation.

With the adoption of the Federal Law 216-FZ of July 29, 2017 on Innovative Science and Technology Centers and on Amendments to Individual Legislative Acts of the Russian Federation (Collected Legislation of the RF №31. Art. 4765, 2017), another territorial unit of research interest emerged in Russia. In the law, the territory of the innovation science and technology center means the combination of land lots (parts thereof) with special legal regulation of operations. The territory is set aside for the implementation of a specific project. Innovation science and technology center as such is a combination of organizations whose purpose is to conduct science and technology activities and other agents whose primary function is to support the functioning of the center.

At present, there are several dozens of industrial clusters in Russia (mainly in the initial phase of formation and development).

The best known are:
- Volgodonsk nuclear engineering cluster (Rostov Region),
- Kama innovation industrial cluster in Tatarstan (Republic of Tatarstan),
- Nizhny Novgorod innovation industrial cluster in the automotive and petrochemical industry (Nizhny Novgorod Region),
- Fryazino industry cluster (Moscow Region),
- fiber optics and optoelectronics industry cluster in Mordovia,
- innovation jet propulsion cluster Novy ZvyozvdnyTechnopolis (Perm Territory),
- titanium engineering cluster in Sverdlovsk Region,
- industry cluster Uralagromash (Southern Urals).

Each cluster type may, in addition to common attributes, have some characteristic features. In the Russian literature, there is still no single model of an industry cluster. Proper horizontal (between cluster participants, partners) and vertical (with federal and/or regional authorities) ties play an important role in the operation of an industry cluster. Such ties are formed and supported by bilateral and multilateral contracts and agreements partnership, cooperation, joint activities, etc.).
3. Results and Discussions

Based on theoretical analysis and generalization of the world experience, the authors conclude that the industry cluster infrastructure must include:

- post-secondary education institutions active in research, and (or) one secondary vocational and (or) professional training institution, and (or) one further vocational education institution, training professionals for the industry cluster’s participants to support the achievement of the industry cluster’s goals,

- technology infrastructure enabling the industry cluster participants to form interconnected industry agents active in the given sector due to territorial proximity and functional interdependence and located in one or more constituent entities of the Russian Federation.

As this study has shown, in Russia attempts are being made to implement cluster policy, to build and stimulate innovation clusters as growth engines of the national economy. Some problems have been encountered in this process. The introduction of complex management models should be preceded by careful doctrinal and legislative elaboration of a number of key concepts that are the prerequisites for the implementation of cluster policy in the existing legal framework of the Russian Federation. Such issues should be promptly addressed as consolidation of the legislative concept of cluster and main cluster types, definition of the legal foundation of economic activity in clusters, describing the specific features of individual cluster types (where necessary due to the existing cluster policy in the respective industry or sector of the Russian economy).

Economic agents face significant difficulties in making management decisions (from the development of a business project or plan under conditions of legal uncertainty to the implementation of its individual phases in territories with special legal regulation). Many of the problems faced by businesses are due to imperfections of the legislation in this field. The daily work of the economic planning officials involved in public administration has its own challenges. They face problems arising in the implementation of individual elements of the cluster policy under conditions of legal uncertainty (legal nihilism, conflict of interest, corruption, etc.).

A separate problem is inconsistency of the legislation on innovation. It should be built into the legislation on clusters. Otherwise, instead of innovation clusters, inefficient, difficult to control systems may develop, whose economic and social effects is doubtful, while the costs incurred by the government and the society are significant.

4. Conclusions

This research led the authors to the following conclusions:

The conventional classification of the economy into industries and sectors is being replaced by clusters — groups of interrelated leading economic agents bringing together industry, science, health care, and education.

The focus of the government efforts in pursuing the cluster policy should be not on supporting individual industries, economic sectors, or individual economic agents, but on supporting clusters. This can be both direct support (especially in the initial phase of the cluster’s life cycle) and indirect (via stimulation or mediation in the development of horizontal and vertical links between stakeholders, supporting demand for the cluster’s innovative products).

A cluster is not only a community of closely interrelated industrial enterprises, but also that of educational and research institutions that promote competitiveness.

The main goal of implementing the cluster policy is to ensure high economic growth and diversification of the national economy by strengthening the competitiveness of businesses, vendors of technology, components, specialized manufacturing and support services, research and educational institutions.

5. Recommendations
Based on the conducted analysis of the existing legislation and practices, the authors suggest several possible options for the development of the Russian federal legislation underlying the cluster policy.

One of the options is the adoption of the Federal Law on Clusters in the Russian Federation or on Cluster Policy in the Russian Federation. The law should become the central piece of legislation regulating the establishment and operation of clusters. It should define the concept, nature, types of clusters, principles of cluster policy, features of innovation in clusters and measures of support to innovation, legal regulation of economic activity in clusters, legal framework of economic activity in certain types of clusters.

Another option is the adoption of a federal law governing the establishment and operation of the majority of clusters (for example, in the manufacturing industry). Establishment and operation of other clusters (for example, in sports, tourism) will be regulated by other federal laws.

A third option is the adoption of individual chapters, sections in existing federal laws governing certain types of entrepreneurial and other economic activity (in the manufacturing industry, healthcare, education, sports, etc.).

The authors recommend the first option. It allows to consolidate the key approaches to the cluster policy, reduce the number of regulations, ensure clarity and transparency of the cluster policy in all spheres of economic activity, where clusters will be established. In addition, it will also take into account the peculiarities of individual clusters, while avoiding unnecessary duplication of regulatory provisions.

Bibliographic references


